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Indicators of Middle School Implementation: How Do Kentucky's Schools to Watch Measure Up?

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Abstract

High-performing middle schools are a critical link in the educational continuum. In an effort to stimulate the sluggish reform efforts of middle schools, the National Forum to Accelerate Middle-Grades Reform established the Schools to Watch recognition program. Using responses of school personnel to a statewide survey, this study examined the perceived level of implementation of key tenets of the middle school concept as outlined by *This We Believe: Successful Schools for Young Adolescents* (National Middle School Association, 2003) in schools designated Kentucky Schools to Watch as compared to non-designated schools. Additionally, the study reviewed the academic performance of Kentucky's middle schools on the Kentucky Core Content Test to determine whether the schools identified as Kentucky Schools to Watch experienced higher levels of student academic achievement. Results indicated a slightly higher perceived level of implementation of key tenets of the middle school concept in Kentucky's Schools to Watch and revealed overall higher levels of academic achievement as measured by the Kentucky Core Content Test.

Background

Preparing middle grades students to be successful in the 21st century has long been the goal of the middle school movement. For students to be successful, it is imperative that they receive an education that goes beyond basic instruction in reading, writing, and mathematics to include opportunities for them to use their unique abilities to solve real-world problems, work collaboratively, and deepen their knowledge base in a safe, supportive, and nurturing environment.

In recent years, middle schools have been criticized and accused of replacing academic rigor with identity development. In the report *Mayhem in the Middle: How Middle Schools have Failed America—and How to Make Them Work*, Cheri Pierson Yecke (2005) stated, "Middle schoolism is based on pseudo-scientific theories and downplays academic achievement. The middle school movement advances the notion that academic achievement should take a back seat to such ends as self-exploration, socialization, and group learning" (p. ii). Other organizations and councils with a long history of focusing on middle level education have been

proponents of rigorous academic programs for middle level students (i.e., Carnegie Council on Adolescent Development, 1989; Jackson & Davis, 2000; National Forum to Accelerate Middle-Grades Reform, 2006b; National Middle School Association, 2003), while continuing to address the social, emotional, and physical needs of these adolescents. This study acknowledges the middle school movement has both proponents and critics but that both positions seek a relatively similar goal—an excellent educational experience for all middle level students.

In an effort to heighten the sense of urgency concerning the need for high-performing middle schools, the National Forum to Accelerate Middle-Grades Reform launched the national Schools to Watch (STW) program to recognize middle level schools that are on a trajectory toward academic excellence, developmental responsiveness, and social equity (National Forum to Accelerate Middle-Grades Reform, 2006b). Since its inception, the National Forum's Schools to Watch program has expanded to include state-level recognition programs. This study explored the relationship between schools recognized as a Kentucky School to Watch (KSTW) and the implementation of the tenets of the middle school concept as outlined in *This We Believe* (NMSA, 2003), a commonly accepted standard for effective middle level education. Though they are separate entities, the visions for effective middle schools espoused by the National Forum and the National Middle School Association (NMSA) are similar. Because Kentucky's Schools to Watch were evaluated using the criteria established by the National Forum to Accelerate Middle-Grades Reform, using the same criteria to evaluate other schools would be unfairly biased against schools that have not applied for the Kentucky School to Watch designation. To avoid this bias, *This We Believe* was used as the conceptual framework for this research. Using survey data and data available through the Kentucky Department of Education, the researchers examined Kentucky Schools to Watch from two perspectives and sought to:

- Compare the perceived level of middle school implementation between schools designated a Kentucky School to Watch and Kentucky middle schools that have not earned this designation
- Compare the levels of academic achievement between schools designated a Kentucky School to Watch and those that have not earned this designation.

This study addresses two key research questions outlined by National Middle School Association's *A 21st Century Research Agenda* (1997): (1) What is the depth and breadth of implementation of middle level education programs, policies, and practices necessary to bring about various levels of change? (2) What are the direct and indirect effects of middle school programs, policies, and practice on student achievement? Having this information helps validate the use of the Schools to Watch criteria as a means of middle school program evaluation and staff development. Answers to these questions may provide evidence that the School to Watch designation identifies schools that can serve as models of excellence for other schools, thus refuting the claims of some that the middle school model is ineffective. This study also builds upon previous work (Kentucky Department of Education, 1991; McEwin, Dickinson, & Jenkins, 2003) to improve measures of middle school implementation.

For at least the past one hundred years, the American educational system has acknowledged the need to provide adolescents between the ages of 10 to 15 a unique and specifically tailored developmentally responsive educational experience. This began with junior high schools in the early 1900s and eventually, after failing to meet the developmental needs of adolescents, transformed into middle schools in the late 1960s (Toepfer, 1997). Initially, the junior high school curriculum model focused on core subjects and was intended to prepare students for one of two tracks—college or the workforce—whereas, the middle school model wanted to focus its curriculum on the developmental needs of adolescents while highlighting the different content areas. Though supported in theory, most of the newly transformed middle schools struggled to provide the necessary programs outlined under the middle school concept and operated ultimately under the same premise as before—a junior high school model. Unfortunately, the majority of teachers and school leaders employed in the nation's middle schools had not been prepared to deliver a curriculum within the context of the middle school concept, and, as a result, a cycle of inconsistency was perpetuated and minimal change occurred.

The release of *Turning Points: Preparing American Youth for the 21st Century* (Carnegie Council on Adolescent Development, 1989) highlighted the inadequacies of America's middle level schools, continuing to draw attention to the lack of quality educational experiences for young adolescents. To complicate matters, *Turning Points 2000* (Jackson

& Davis, 2000) revealed that change continued to be sluggish in America's middle schools, and the need for improvement had become paramount. Around the same time (1997), the National Forum to Accelerate Middle-Grades Reform was established in an effort to stimulate change and further the advancement of the middle school concept. The guiding principle of the National Forum is that all middle level schools should be on a trajectory to become academically excellent, developmentally responsive, and socially equitable. To highlight the middle level schools that were on the trajectory toward excellence, the National Forum established the Schools to Watch (STW) program. To become a School to Watch, a school must complete a thorough self-study and application process and be evaluated by a team of specially trained evaluators that score each school on 34 criteria related to the components of academic excellence, developmental responsiveness, and social equity. Since the naming of the first four national Schools to Watch in 1999, the recognition program has expanded to include state-level recognition in 14 states across the country—California, Georgia, North Carolina, Colorado, Illinois, Kentucky, Virginia, New York, Ohio, Michigan, Arkansas, Pennsylvania, South Carolina, and Utah (National Forum, 2006a). In 2003, the Commonwealth of Kentucky joined the National Forum's efforts to recognize high-performing Kentucky middle schools. Currently, 15 middle schools in the Commonwealth are designated a Kentucky School to Watch (KSTW).

As more states join the STW effort, additional research is needed to establish the link between effective implementation of the middle school concept and STW designation. Though studies have been completed on the level of implementation of the middle school concept (McEwin, Dickinson, & Jenkins, 2003) and the positive impact of implementation on student achievement (Backes, Ralston, & Ingwalson, 1999; Felner, et al., 1997; Lee & Smith, 1993), few studies have specifically focused on schools designated as a STW. Research is necessary to examine the potential relationship between the STW designation and student academic achievement.

Methods and Data Sources

This study was part of a statewide descriptive study examining the level of middle school concept implementation in Kentucky's middle schools. Using *This We Believe* (NMSA, 2003) as the framework, the researchers surveyed middle school teachers and building level administrators concerning their perceptions of implementation in the middle school in which they work. The researchers also collected spring 2007 state assessment data from the Kentucky Department of Education as an indicator of achievement common to all public schools in Kentucky to examine the level of student academic achievement in KSTW schools as compared with non-designated schools. It is worthy of note that between the time the study commenced and assessment data became available, an additional five Kentucky schools received KSTW designation, accounting for the difference from 10 KSTW in the implementation survey sample to 15 KSTW in the achievement sample.

Implementation Survey Sample and Data Collection

To compare the level of middle school implementation between KSTW and non-designated schools, the researchers surveyed middle school teachers and building administrators. The population consisted of all public schools in the Commonwealth of Kentucky that incorporated the seventh grade into their organizational structure, regardless of grade level configuration or whether the name of the school included the words *middle school*. For this reason, the population, consisting of 344 schools, included some elementary, middle, and secondary schools. From this population, the researchers selected a stratified random sample consisting of five schools from each of Kentucky's eight educational service regions. Selecting a stratified random sample increased the breadth of representation across the state. In addition to the 40 schools in the stratified random sample, the researchers included all 10 of the schools designated a KSTW at the time the study commenced. Therefore, the total sample included 50 of the 344 schools (14.5%) in the population. The demographics of the Kentucky Schools to Watch were noteworthy. The KSTW represented a cross section of the state and included schools from several educational service regions. The KSTW had varying levels of racial and socioeconomic diversity, and the schools were diverse in size and locale (rural, urban, and suburban).

Data were collected using a survey instrument developed by the researchers. Using *This We Believe* (NMSA, 2003) as the basis for the survey, the researchers developed an instrument, which included eight sections encompassing the 14 cultural and programmatic features of effective middle schools suggested by the National Middle School Association in its vision statement (NMSA, 2003, p. 7). The

following sections were included: middle school concept and professional preparation, advisory, school mission, teaming, school environment, expectations, curriculum and instruction, and parental involvement with additional demographic items. The survey included both binary choice and Likert-scale items, and it was designed for distribution in an electronic format. The researchers piloted the instrument regionally (Faulkner & Cook, 2006) and attempted to correct deficiencies before statewide data collection.

Data collection commenced in March 2007 and ended in May 2007. Before distributing the survey, the researchers personally contacted the principal of each school in the stratified random sample to solicit his or her consent. Upon receiving consent, the researchers sent the URL for the electronic survey embedded in an email message to the principal. The principal, in turn, distributed the message to all certified personnel in his or her building. If a principal did not consent to voluntary participation, a replacement school from the same region was randomly selected. Citing the proximity of the data collection to the time of the state testing window, four schools opted not to participate and were replaced. In total, 569 certified school personnel responded to the survey. Responses came from all eight of Kentucky's educational service regions as well as from all 10 of the currently designated KSTW.

Achievement Sample and Data Collection
To assess the potential relationship between KSTW designation and student academic achievement, the researchers utilized the results of the spring 2007 administration of the Kentucky Core Content Test, one of the required state assessments of the Commonwealth Accountability Testing System (CATS). This sample consisted of all schools in Kentucky specifically identified in name as a "middle school," regardless of grade configuration, and all Kentucky Schools to Watch. In total, the sample comprised 222 schools, including both identified middle schools and 15 KSTW. Assessment data for each school were obtained from the individual school performance reports provided by the Kentucky Department of Education website (2007). For each school in the sample, the researchers selected four primary assessments for comparison—overall index, reading, writing, and mathematics.

Results and Discussion

Middle School Implementation
Of the 568 total survey responses received, 257 responses were from schools designated as KSTW, and 311 from non-designated schools. Eighty-three percent, or 213 of the respondents from schools designated a KSTW provided the name of their school, whereas 78%, or 243 of the non-designated schools chose to do so. Respondents who did provide the name of their school represented 32 schools. The number of responses from a school ranged from 1 to 35, with a mean number of responses per school of 14.2.

Reliability analysis for the overall survey yielded a Cronbach's alpha of .98. Sub-scale reliabilities ranged from .63 to .89, as reported in Table 1.

Responses to Likert-scale items were assigned a value of 4 for "Strongly Agree," 3 for "Agree," 2 for "Disagree," and 1 for "Strongly Disagree." (punctuation inside quotation marks. Before compiling responses to the Likert scale items, responses to all negatively worded questions were reversed.

Table 1
Results of Reliability Analysis

Sub-Scale	No. of Items	Cronbach's alpha
Concept & Preparation	11	.75
Advisory	10	.63
Mission	5	.86
Teaming	8	.72
Environment	13	.89
Expectations	6	.76
Curriculum & Instruction	13	.84
Parental Involvement	5	.68

Table 2
Responses to Likert-Scale Items

	Kentucky Schools to Watch				Non-Kentucky Schools to Watch			
Sub-Scale	N	Mean	SD	SE	N	Mean	SD	SE
Concept & Preparation	241	3.4	.40	.026	279	3.1	.37	.022
Advisory	85*	3.2	.46	.050	47*	3.0	.42	.061
Mission	223	3.4	.56	.038	262	3.1	.60	.037
Teaming	219	3.0	.54	.036	252	2.6	.50	.032
Environment	228	3.3	.42	.028	267	3.1	.43	.026
Expectations	223	3.4	.41	.028	262	3.2	.41	.025
Curriculum & Instruction	212	3.3	.37	.026	252	3.1	.35	.022
Parental Involvement	219	3.5	.39	.027	257	3.2	.39	.024

Note:* Respondents' answer "no" to binary choice question "Do you have advisory?" did not respond to Likert-scale items regarding advisory.

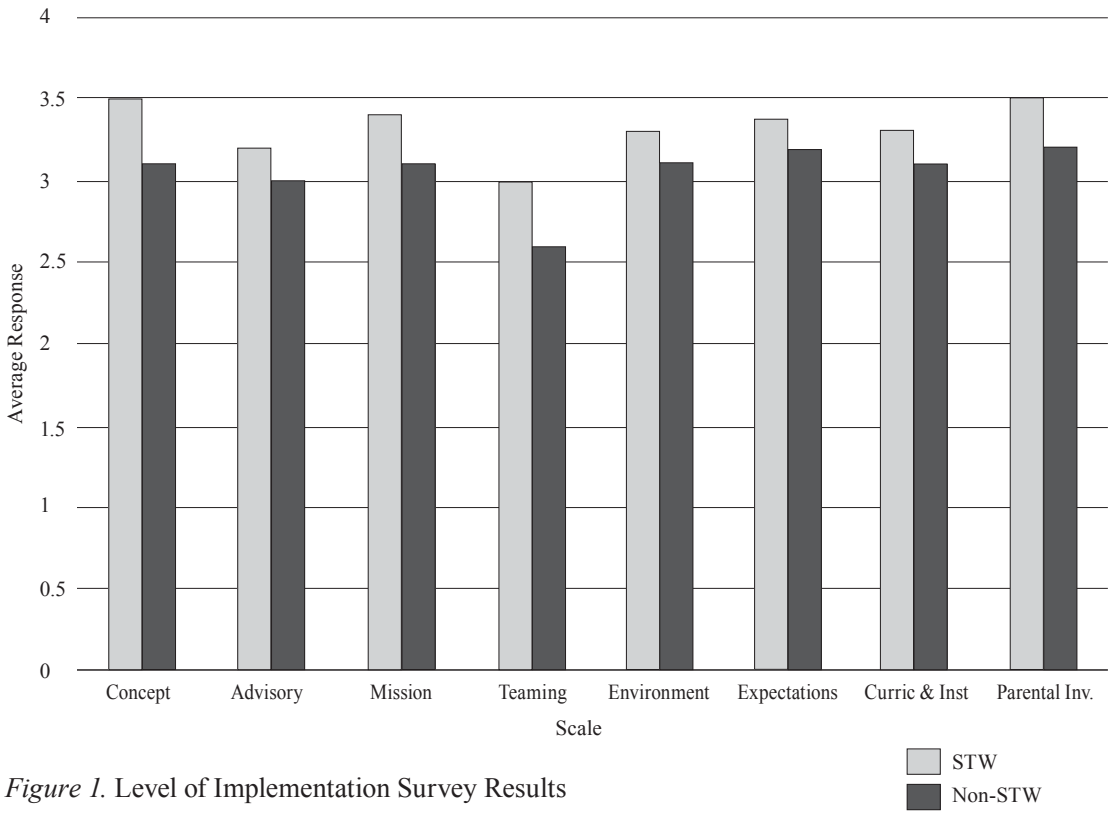

Figure 1. Level of Implementation Survey Results

For example, a "Strongly Agree" response to the negatively worded item: "Parental involvement is unnecessary at the middle school level" would be assigned a value of 1; whereas a "Strongly Disagree" response to such an item would be assigned a value of 4. Scores for each of the eight sub-scales were calculated by summing each participant's responses to the items in that sub-scale, then dividing by the number of items in that scale. Descriptive statistics for each of the sub-scales are reported in Table 2.

Respondents from KSTW reported a higher perceived level of implementation across all eight sub-scales than those reported by respondents from non-designated schools, as shown in Figure 1.

Four of the sub-scales included preliminary questions in binary choice format. As shown in Table 3, a higher percentage of respondents from KSTW than respondents from non-designated schools responded affirmatively to six of the seven binary choice questions, and on three of these, the difference was significant. The binary choice questions yielding significant differences were used to tease apart the Likert-scale responses to questions.

A 2 x 8 multivariate analysis of variance (MANOVA) was used to analyze each of the eight sub-scale scores as dependent variables with the independent variable of school designation. There was a significant main effect of school designation, Pillais $F(8, 103) = 2.27$, $p < .05$, $\eta^2 = .15$. There were no significant interactions. This demonstrates that overall, respondents from KSTW schools reported higher levels of implementation than respondents from non-designated schools.

Univariate analyses were conducted on each of the eight sub-scales as follows. The three sub-scales of concept, advisory, and teaming each included at least one binary choice question with significant results, which was factored into the analysis for that scale. A 2 (school designation) x 2 (teaching certificate) univariate analysis of variance (ANOVA) on the dependent variable of the Concept/Preparation sub-scale scores yielded significant main effects of school designation, $F(1, 516) = 35.26$, $p < .01$,

Table 3
Responses to Survey Binary Choice Items

Sub-Scale	Question	% Yes KSTW	% Yes Non-designated Schools	Chi-square (df = 1)
Concept & Preparation	Did your teacher preparation program specifically focus on becoming a middle level teacher?	38.2	38.4	n.s.
Concept & Preparation	Do you currently hold a State of Kentucky middle level teaching certificate (grades 5–9)?	66.8	59.1	n.s.
Advisory	Does your school have a formal advisory program?	44.2	22.6	26.6*
Mission	Does your school have a mission statement?	100	99.6	n.s.
Teaming	Is your school organized into teams?	97.8	82.4	31.2*
Teaming	Are you provided daily individual planning time?	96.5	94.8	n.s
Teaming	Are you provided daily team planning time?	80.3	59.5	24.2*

Note: * significant at $\alpha = .01$

Table 4
Results of One-Way ANOVAs

Sub-Scale	df	F	η2	p
Curriculum & Instruction	1, 462	30.18	.06	<.01
Environment	1, 493	38.71	.07	<.01
Expectations	1, 483	37.07	.07	< .01
Mission	1, 483	19.44	.04	< .01
Parental	1, 474	55.30	.10	< .01

$\eta^2 = .06$, and teacher licensure, $F(1, 516) = 20.39$, $p < .01$, $\eta^2 = .04$. There were no significant interactions. Respondents from schools designated as KSTW reported significantly higher levels of implementation than respondents from non-designated schools, regardless of whether they held a middle level teaching certificate. Respondents who held a middle level teaching certificate reported significantly higher levels of implementation than those who did not hold such a certificate, regardless of whether they were working in a KSTW school. However, as indicated by the effect sizes, these differences were very small.

A 2 (school designation) x 2 (advisory) univariate analysis of variance (ANOVA) on the dependent variable of Advisory sub-scale scores yielded a significant main effect of having advisory, $F(1, 128) = 28.67$, $p < .01$, $\eta^2 = .18$, and a significant two-way interaction between having advisory and school designation, $F(1, 128) = 5.56$, $p < .05$, $\eta^2 = .04$. Follow-up bidirectional independent sample Bonferroni *t*-tests showed that for schools that have advisory, there is a significant effect of school designation, $t(117) = 2.03$, $p < .05$, d = .40; but for schools not having advisory, there is no significant effect of school designation. Among schools that have advisory, there was a significantly higher level of perceived implementation. As shown by the effect size, the difference was moderate in size.

A 2 (school designation) x 2 (teams) x 2 (individual planning) x 2 (team planning) univariate analysis of variance (ANOVA) on the dependent variable of Teaming sub-scale scores yielded significant main effects of school designation, $F(1, 471) = 4.98$, $p < .05$, $\eta^2 = .01$, and team planning, $F(1, 471) = 13.35$, $p < .01$, $\eta^2 = .03$. There was also a significant two-way interaction between schools reported as being organized into teams, and schools reported as having daily team planning time, $F(1, 471) = 5.03$, $p < .05$, $\eta^2 = .01$. As shown, the effect sizes of these interactions are minimal. Follow-up bidirectional independent sample Bonferroni *t*-tests showed that for schools organized into teams, there was a significant effect of having daily team planning time, $t(424) = 5.95$, $p < .01$, d = .67; and for schools not organized into teams, there was also a significant effect of having daily team planning time, $t(43) = 4.06$, $p < .01$, d = 1.46. Although both have effect sizes that suggest a meaningful difference, the effect size for schools that were not organized into teams is more than double that of schools that are organized into teams.

Separate one-way analyses of variance (ANOVA) yielded a significant main effect of school designation for each of the remaining sub-scales, as summarized in Table 4. On each of these sub-scales, respondents from KSTW reported higher levels of implementation than respondents from non-designated schools. On the Curriculum and Instruction sub-scale, respondents reported instructional strategies utilized, as well as schoolwide curriculum options and strategies. Respondents from KSTW reported significantly higher implementation of strategies consistent with middle school philosophy than respondents from non-designated schools. On the Environment sub-scale respondents reported their perceptions of physical and emotional safety and level of respect. Respondents from KSTW reported significantly higher perceptions of these factors than respondents from non-designated schools. On the Expectations sub-scale respondents reported their perceptions of expectations for student and teacher success. Respondents from KSTW reported significantly higher agreement with statements of expectations of success than respondents from non-designated schools. On these three sub-scales, Curriculum and Instruction, Environment, and Expectations, effect size of the difference between KSTW and non-designated schools was rather small. The effect size on the Mission sub-scale was

even smaller. KSTW and non-designated schools were equally likely to have a mission statement, but respondents from KSTW reported significantly greater implementation of their school's mission statement than that reported by respondents from non-designated schools. The sub-scale yielding the largest effect size was that of Parental Involvement, indicating that substantially greater efforts to involve parents in the education of their middle level students were reported by respondents from KSTW than by respondents from non-designated schools.

Academic Achievement

To compare the levels of academic achievement between KSTW and non-designated schools, the researchers examined the results of the spring 2007 administration of the Kentucky Core Content Test. For this comparison, the researchers examined each school's overall index score as well as each school's scores in reading, writing, and mathematics. The overall index score consisted of the school's combined performance on the reading, mathematics, science, social studies, arts and humanities, practical living/vocational studies, and writing (on-demand and portfolio) assessments of the Kentucky Core Content Test.

Performance on the overall index score revealed the KSTW schools ranked from 92 of 222, to as high as 1 of 222 schools, with the lowest KSTW score being the same as or better than 58.6% of Kentucky middle schools and the highest being the highest scoring school in the state. Taken collectively, on average, the KSTW schools did as well as or better than 78.1% of Kentucky middle schools.

In analyzing reading performance, the KSTW schools ranged from 1 to 128 with the lowest KSTW score

Table 5
Academic Performance of Kentucky Schools to Watch

STW	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	Mean S.D
							Numeric Rank (of 277)									
Reading	27	43	20	66	128	30	62	31	1	40	24	67	44	15	120	47.9 *36.1*
Writing	35	107	82	12	100	24	43	59	4	49	11	37	137	71	38	53.9 *38.7*
Math	48	90	53	61	30	149	98	34	6	26	42	11	87	3	5	49.5 *41.6*
Overall Index	30	81	62	36	92	29	63	25	1	37	21	22	74	39	44	43.7 *25.4*
							Percentile Rank									
Reading	87.8	80.6	91.0	70.3	42.3	86.5	72.1	80.6	99.9	82.0	89.2	69.8	80.2	93.2	45.9	78.1 *16.2*
Writing	84.2	51.8	63.1	94.6	55.0	89.2	80.6	73.4	98.2	77.9	95.0	83.3	38.3	68.0	82.9	75.7 *17.4*
Math	78.4	59.5	76.1	72.5	86.5	32.9	55.9	84.7	97.3	88.3	81.1	95.0	60.8	98.6	97.7	77.7 *18.7*
Overall Index	86.5	63.5	72.1	83.8	58.6	86.9	71.6	88.7	99.9	83.3	90.5	90.1	66.7	82.4	80.2	80.3 *11.5*

being the same as or better than 42.3% of Kentucky's middle schools. Taken collectively, KSTW schools scored as well as or better than 78.1% of Kentucky middle schools on the reading accountability measure. Writing results indicated the KSTW schools ranged from 4 to 137, with the lowest score being the same as or better than 38.3% and the highest being the same as or better than 98.2%. Collectively, the KSTW schools scored as well as or better than 75.7% of Kentucky middle schools on the writing indicator. Finally, the mathematics performance report revealed that KSTW schools ranged from 3 to 149. Though the lowest school score is only the same as or better than 32.9% of Kentucky middle schools, the collective average of the KSTW reveals schools scoring as well as or better than 77.7% of Kentucky middle schools on the mathematics accountability measure.

Conclusions and Recommendations

Levels of Implementation

Responses from this survey indicate that certified staff employed in Kentucky Schools to Watch perceive their schools to have an overall higher level of implementation of key components of the middle school concept than do certified staff employed in Kentucky middle schools that are not designated as a Kentucky School to Watch. The difference is modest, but consistent. It is also important to note that this study measured the perceptions of only those stakeholders who were employed as certified staff. The perceptions of other stakeholders—students, parents, non-certified staff—may be different; however, these caveats apply equally to both KSTW and non-designated schools. There is no reason to believe that any such differences in perception would exist in Schools to Watch but not in non-designated schools, or vice versa. Thus, it is reasonable to conclude that Kentucky Schools to Watch are implementing middle level practices at a slightly higher level than non-designated schools. The fact that the data collection instrument for this study was derived from *This We Believe* (NMSA, 2003), a commonly accepted standard for effective middle schools, and that KSTW reported higher levels of implementation of these practices, seems to enhance the content validity of the KSTW criteria as a measure of middle school concept implementation.

Levels of Academic Achievement

Analysis of state assessment data revealed overall higher levels of academic achievement of the Kentucky schools with KSTW designation. Despite some low scores, the researchers did not find the overall higher scores surprising since middle grades research has consistently reported that students in highly implemented schools outperform students in partial and low implemented schools in all subject areas (Felner et al., 1997).

The researchers drew two conclusions from these findings. First, the fact that KSTW, though experiencing higher levels of academic achievement overall, had occasional low scores indicated the Kentucky Schools to Watch program has remained true to the intent of the Schools to Watch program—to identify schools on a trajectory of excellence based upon three dimensions—academic excellence, developmental responsiveness, and social equity. Academic excellence—in this case measured by performance on a state assessment—is only one measure of a school's overall effectiveness.

Second, the researchers concluded that though this study did not establish a causal link between middle school implementation and student achievement, those schools that more fully implemented the components of the middle school concept (KSTW designation) experienced higher levels of academic achievement, even in schools with varying demographics and in different locales. The fact that the overall achievement of the KSTW was in the top quartile would seem to indicate that addressing the criteria of the Schools to Watch program did not hinder the schools from performing at higher levels.

Considering these findings, the researchers make three recommendations. First, the researchers recommend continued examination of the Schools to Watch criteria as a viable measure of middle school implementation. Studies of implementation often rely on quantitative data derived from surveys. Rarely do opportunities exist for researchers to examine the quality of implementation. The application and evaluation process used by the Schools to Watch program offers the best opportunity to date for researchers to examine implementation both quantitatively and qualitatively. Establishing and measuring levels of implementation are critical to future studies linking implementation with achievement.

Based on survey and achievement data, the researchers recommend schools embrace the Schools to Watch program as a means of continuous, comprehensive school improvement and staff development. The researchers also recommend that policymakers support school efforts to align with the criteria of the Schools to Watch program. As

this study demonstrated, schools that made the commitment to academic excellence, developmental responsiveness, and social equity, thus achieving the KSTW designation, experienced overall higher levels of student achievement than non-designated schools. Though the link was not causal, addressing the components of STW did not appear to hinder schools from excelling academically, and addressing the social, emotional, and physical needs of adolescents may result in other positive benefits not measured by this study (i.e., satisfaction with school, motivation, behavior).

Finally, the researchers recommend replication of this study. Future studies should include larger samples of schools across multiple states, using consistent measures of student achievement.

To prepare middle level students for the challenges of the 21st century, it is critical that they receive an education that is relevant, meaningful, and academically challenging, but many would argue that equally important is an education that addresses the physical, social, and emotional nee*ds o*f the students. This study, though not decisive, indicates that schools identified as a School to Watch not only address the academic needs of the students, but they do so while addressing the physical, social, and emotional needs as well.

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